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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/775,795 | 02/10/2004 | Richard Heinen | DN2004013 | 9693 |

27280 7590 10/14/2005

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| EXAMINER |
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MAKI, STEVEN D

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| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,795

Applicant(s)

HEINEN, RICHARD

Examiner

Steven D. Maki

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1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>061005,021004</u> . | 6) <input type="checkbox"/> Other: ____. |

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1) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Europe 456

2) **Claims 1-2, 5, 10-12, 15-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 456 (EP 890456) in view of Iwamura et al (US 6109317) and Japan 207 (JP 6-135207).**

Europe 456 discloses a pneumatic tire having a tread comprising a row of tetragon blocks between two circumferential grooves wherein (1) the blocks have a "relatively large circumferential component" (col. 6 lines 44-45) and (2) are separated by steep slant grooves inclined at a small angle (e.g. 20 degrees) with respect to the circumferential direction. Hence, Europe 456 substantially discloses the claimed invention except that Europe 456 is silent as to the length of the block relative to the footprint.

As to claims 1 and 20, it would have been obvious to one of ordinary skill in the art to provide Europe 456's tire such that the circumferential length of the block separated by the steep slant grooves is at least 100 % (claim 1) or 100-400% (claim 20) of the footprint length since (1) Europe 456 teaches forming the blocks separated by the steep slant grooves in the pneumatic tire such that the blocks have a "relatively large circumferential component" (col. 6 lines 44-45) and (2) Iwamura et al (figure 3) and Japan 207 (figure 1) suggest providing steep slant grooves of a pneumatic tire such that

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that the steep slant groove, which may inclined at an angle of 5-15 degrees with respect to the circumferential direction, has a length longer than that of the footprint in order to improve water drainage.

As to claim 2, see overlap of blocks in figure 1.

As to claim 5, the width of region TC is 15-45% such as 25%

As to claim 10, the blocks are on the EP.

As to claim 11, the claimed distance d would have been obvious in view of the shape and length of the center blocks shown by Europe 456.

As to claim 12, the acute angle corners of the center blocks are chamfered.

As to claim 15, Europe 456 shows the width of the slant grooves as being smaller than the width of the circumferential grooves.

As to claim 16, the claimed width WB would have been obvious in view of (1) Europe 456's teaching to use blocks having a relatively large circumferential length in a central region having a width of 15-45% TW and (2) Europe 456 shows the center blocks as having a width less than the distance between the circumferential grooves.

As to claim 18, it would have been obvious to provide the blocks with different lengths since it is taken as well known / conventional per se to provide a tire tread with different pitches (e.g. different block lengths) in order to reduce noise.

As to claim 19, it would have been obvious to incline the circumferentially extending sides of the center blocks at an angle greater than 0 degrees to the centerline since Japan 207 suggests inclining circumferentially extending sides of blocks in a central region at an angle of about 2 degrees to improve wandering performance.

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3) Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 456 in view of Iwamura et al and Japan 207 as applied above and further in view of Nakagawa (US 6102093).

As to claims 17 and 18, it would have been obvious to one of ordinary skill in the art to provide Europe 456's center blocks with different widths and different lengths as claimed in view of Nakagawa's suggestion to provide center blocks with different widths and different lengths to improve on ice performance.

Japan 513

4) Claims 1-2, 7, 9, 11-12, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 513 (JP 11-5413) in view of Iwamura et al and Japan 207.

Japan 513 discloses a pneumatic tire comprising two rows of tetragon shaped central blocks wherein each block row is between a center circumferential groove and an outer circumferential groove. The blocks are separated by steep slant grooves inclined at an acute angle of 10-45 degrees with respect to the circumferential direction. The length of the central blocks is 2-5 times the length of adjoining blocks 9. Hence, Japan 513 substantially discloses the claimed invention except that Japan 513 is silent as to the length of the block relative to the footprint.

As to claims 1 and 20, it would have been obvious to one of ordinary skill in the art to provide Japan 513's tire such that the circumferential length of the central block separated by the steep slant grooves is at least 100 % (claim 1) or 100-400% (claim 20) of the footprint length since (1) Japan 513 teaches providing the blocks, which are

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separated by steep slant grooves, with a length 2-5 times the length of adjoining blocks and (2) Iwamura et al (figure 3) and Japan 207 (figure 1) suggest providing steep slant grooves of a pneumatic tire such that the steep slant groove, which may be inclined at an angle of 5-15 degrees with respect to the circumferential direction, has a length longer than that of the footprint in order to improve water drainage.

As to claim 7, Japan 513 teaches a circumferential groove at the EP.

As to claims 11 and 16, the claimed distance *d* and width *WB* would have been obvious in view of the shape of Japan 513's blocks and Japan 513's teaching to provide the blocks with a length 2-5 times the length of the adjoining blocks.

As to claim 18, it would have been obvious to provide the blocks with different lengths since it is taken as well known / conventional per se to provide a tire tread with different pitches (e.g. different block lengths) in order to reduce noise.

WIPO

5) Claims 1-2, 6, 8-9, 11, 16, 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO in view of Boiocchi et al (US 5964266) and Iwamura et al.

WIPO discloses a pneumatic tire having a directional tread comprising two rows of tetragon shaped relatively long blocks wherein each row of blocks is disposed between a circumferential groove 22 and a circumferential groove 20. See figure 6 and page 17. The blocks are separated by steep slant grooves.

As to claims 1 and 20, it would have been obvious to incline the steep slant grooves of WIPO's directional tread at an angle of 10-25 degrees with respect to the

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circumferential direction since (1) Boiocchi et al, which illustrates a non-directional tread (figure 1) and also teaches a directional tread (col. 8 lines 46-50), suggests inclining steep slant grooves for draining water at an angle of 15-25 degrees with respect to the circumferential direction and (2) Iwamura et al suggests inclining steep slant grooves of a directional tread at an angle of 5-15 degrees with respect to the circumferential direction in order to dissipate water.

Furthermore, it would have been obvious to one of ordinary skill in the art to provide WIPO's tire such that the circumferential length of the blocks is at least 100 % (claim 1) or 100-400% (claim 20) of the footprint length since (1) WIPO shows using steep slant grooves to define the relatively long blocks and (2) Iwamura et al (figure 3) suggests providing steep slant grooves of a pneumatic tire such that that the steep slant groove, which may inclined at an angle of 5-15 degrees with respect to the circumferential direction, has a length longer than that of the footprint in order to improve water drainage.

As to claims 2, 6, 8 and 9, see figure 6 of WIPO.

As to claims 11 and 16, the claimed distance d and width WB would have been obvious in view of the shape of WIPO's relatively long blocks separated by steep slant grooves and the above noted suggestion from Iwamura to provide steeply slant grooves with a length longer than the footprint length.

As to claim 18, it would have been obvious to provide the blocks with different lengths since it is taken as well known / conventional per se to provide a tire tread with different pitches (e.g. different block lengths) in order to reduce noise.

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6) **Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO in view of Boiocchi et al and Iwamura et al as applied above and further in view of Japan 308 (JP 2000-272308), German 574 (DE 614574) or Weber et al (US Des. 459290).**

As to claims 3 and 4, it would have been obvious to provide WIPO's overlapping relatively long blocks separated by the steep slant grooves such that a lateral line can be drawn through at least three blocks in view of the suggestion from Japan 308 (figure 3), Weber et al (figure) or German 574 (figure 7) WIPO to provide overlapping relatively long blocks separated by steep slant grooves such that a lateral line can be drawn through three blocks.

7) **Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WIPO in view of Boiocchi et al and Iwamura et al as applied above and further in view of Japan 508 (JP 2-179508).**

As to claims 13 and 14, it would have been obvious to provide WIPO's blocks such that the upper portion defines a facing angle of 70-85 degrees with respect to the radial direction (5-30 degrees with respect to the tread surface) whereas the lower portion of the block defines a smaller angle with respect to the radial direction since Japan 508 suggests configuring blocks with such a facing angle to reduce noise and improve non-uniform wear (abstract, figures 1, 2).

Remarks

8) The remaining references are of interest.

9) No claim is allowed.

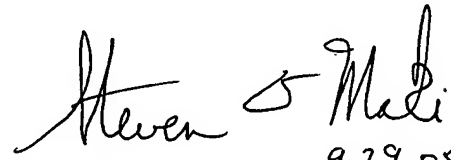
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10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
September 29, 2005


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
AV 1733
9-29-05